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ELSIE AND THE MOON.

PROF. W. H. WYNN.

" O, Elsie, see the great round moon," I said,
As up the east with broad full disk it rose,
And stars retreating in the twilight led
The pensive summer evening to its close.

"The moon ! the moon ! O, Elsie, see the moon ;"
Ah, scarcely yet three summers had she known,
When baleful shadows, falling all too soon,
Her little childish dreams had overblown.

A baby sister languishing had died,
And low in sobbing all the household bowed,
The wanted kiss was tenderly denied,
And Mama fell to weeping long and loud.

"O, Elsie see the moon." "Up there" she cried,
"Up there my little sister lives that died ;"
A mimic flutter as of wings she made,
As upward with the angels she would glide.

"Up in the moon my little sister lives,"
And peering long across the purple air,
More ravishment the barren planet gives,
Then paradises ever green and fair.

O, men mature, 'twere well that you should know,
In childhood's faith how measureless the boon,
How drear the skies when faithless you forego,
Our little Elsie's vision of the moon.

The baby sister, doubtless, was not there,
In lava-pits no cherub ever strayed,
A land all scarred, and fountainless, and bare,
A home for demons rather was it made.

But in the moon our Elsie saw aright,
All on the bosom of the night unfurled,
A banner God had rolled in living light,
Close on the confines of a better world.

In peace it rolls, and all the air is peace,
And night and tempest own its conquering sway,
O, verily, where earth's commotions cease,
There are the lintels of the gates of day.

No spirit-moorings ever greet the eye,
In stellar spaces desolate and bleak,
Beyond all worlds that dot our nether sky,
The home of the immortals we must seek.

THE LOVE OF EXCELLENCE.

W. D. W.

The names of those whose lives have come down to us from the mists of the ages, of those whose characters mark them as masters of ethics and whose minds reveal to us the stamp of the Creator, of those whose whole career shines with brilliant deeds and becomes glorious because of burning words, of those who have been true leaders of mankind—the names of all these are but few; few, when compared with the multitudes of men among whom the masters strove; few, as viewed in the light of the opportunities enjoyed and the free motive of the love of excellence with which the leaders wrought.

The comment is not inapplicable at the present day. Not a change of the seasons but some young man takes his place beside his fellows to labor for success. Not a moon but what, changing in its "circling orb, "sees some young woman step forth into the battle for advancement. Not a twilight settles down upon us but shades some youth as he retires to rest, to gain vigor and renewed ambition for the morrow's race with the busy world. And each hopes to win; and few hopes are realized.

But the reason is not difficult to grasp, and each one of us can profit by its study.

When we seek below the surface for the cause of success or failure, the love of excellence appears, in a greater or less degree, as the underlying motive of human action and mental development.

This love is not the desire to equal one's fellows, nor even to surpass them; but an intense longing to conquer because of the pleasure given by a real victory, and the strength imparted by such an effort as brings success. This is true in whatever field it be applied, and there is but one exception to the rule.

For a student to emulate his neighbor, does not necessarily make him a master; nor would the same end be attained if his emulation be extended to the instructor under whom he daily sits. It is true that a successful imitation of the great of any age, may give a man position on a plane higher than that of those around him; but yet it is not safe, and the one Great Teacher is his sole absolute example,—and this is the exception!

If the man of legal lore extend his knowledge but to the standard of his colleague, he is not certain of diving deep into the mysteries of the law. It is true that a Blackstone may be emulated, and if a man equals the example, he may be lifted high above the common ones below. But such standards are still too weak and low in themselves for the truest mind, and the one great Law Giver is the only absolute example—and this is the exception!

The professor of christianity saves not himself by reaching the standard of morality and righteousness adopted by humanity. If he follow the good and true because of its real worth and because he, himself, desires excellence for its own sake alone, then his penance avails him much. No man is his safe guide; only the Infinite is his sure and safe example—and this is the exception!

From these illustrations we learn that each man should be his own master; that he should strive to accomplish just what is in his power, and not aim to work a work simply because he finds others have wrought the same; that his aim should be, not to labor to excel another, but to put forth his powers with his might because in himself lies the excellency. And if these evident truths be taken in each daily life of a mind and heart, the failures of the mental, moral, and social worlds would vanish, and success would reign supreme. There are proper times and occasions in each man's life for emulation; but such a motive as an exclusive rule of action leads to a character not the best, far from the noblest, and much below the true ideal; while a strife for knowledge, for place, for power, and for righteousness because they, themselves, are worth the having, fashions the man truly for himself, for society, and for God.

PREJUDICE.

Who among us, mingling in society, fails to note how grievously almost every mind is poisoned by prejudice. We are sur-

prised to find almost everyone clinging to his own favorite opinion without being able to assign any reason why he should so hastily take to himself the right to dogmatize with so much assurance, over others. This prejudice may be either for or against the object under consideration, but is in either case none the less harmful, Among the various errors into which human nature is liable to fall, there are some which people of a true understanding are perfectly sensible of in themselves; yet either wanting the necessary strength of resolution, to back that which long custom has made habitual, or being too indolent to endeavor to make a change, still persist in acting contrary to the dictates of their own reason and better judgement.

What we call prejudice or prepossession is certainly that which stands foremost in the ranks of servility. It is the great ring leader of almost all the many mistakes of which we are guilty either in the sentiments of our hearts or in our daily conduct.

Prejudice is the first thing given the mind upon which to feed. No sooner do our mental faculties begin to develop than prejudice mingles with it. Whatever we are taught, or happens of ourselves to like or dislike, we continue for the most part to uphold or condemn to our life's end; so difficult is it to eradicate in age those sentiments imbedded in our youth. It is a fatal propensity that binds, as it were, our reason in chains and will not suffer us to look abroad or exert any of its powers. Hence our conceptions are bounded, our notions meanly narrow, our ideas of men and things unjust, and our judgement shamefully biased.

The brightest ray of truth may shine upon our eyes in vain, if prejudice has rendered us blind. We are even made by it incapable of examining into any subject and consequently take all that is presented to us, on trust,. This renders us liable to be guilty of injustice and unkindness to others as well as insensible of what we owe ourselves. We give a real and substantial good to court an empty name, a mere nothing.

We mistake infamy for renown, and ruin for advantage; in short, whenever strong prejudice prevails, there can be no such thing as a true life and a symmetrical development of our better qualities of mind and heart. What we would be understood to mean by prejudice is not the instructive like or dislike that arises within us at the presentation of any new object. This is due to the inate sympathy which nature has implanted in the minds of every created being, and may be called fancy. It is light and volatile, of little consequence, and very different from prejudice, which, indeed enters chiefly by the ear and is gained by intercourse with others.

When our opinions of persons and things of which we know nothing personally, are guided, and our approbation or disappointment of them founded merely upon what others tell us, and which we afterward refuse to be convinced is false, then it is that we may be said to be governed by that settled prepossession so dangerous to the world, and to our own characters, intentions and happiness.

Rather than to be led into such a dangerous error, let us take nothing upon trust, but place everything upon trial. Let us not condemn everything; neither accept all. But let us adopt the golden mean, and whether in the study of science, politics or religion, determine to hear impartially both sides and then be directed by our only safe guides—our conscience and our reason.

Had not some persons thrown aside the prejudices of their time, we would never have had the many improvements that meet us on every hand. Yet after all it is not an easy task to divest ourselves of acquired prejudices; and few of those who plainly see the many evils arising from its indulgence will even make a slight effort to free themselves.

"So from time to time we first begin to know.
We live and learn and not the wiser grow.
But he who truth from falsehood would discern,
Must first disrobe the mind of all unlearn.
To dispossess the child, the mortal lives,
And death approaches ere the man arrives.
Thus truth lies hid and ere we can explore
The precious gems, our fleeting life is o'er."

And it is only after having spent the

greater part of our lives in acquiring these prejudices, that we realize how short a time we have in which to undo the mischief we have done and prepare to live true lives.

FROM THE RED RIVER VALLEY.

The hurrying crowd that composes the first rush of immigrants to a new country often expect to find elysian fields where all their toils and troubles will speedily end, and life will be a bright dream of pleasure and sunshine. They allow themselves to be persuaded that in the land they are seeking money is to be literally picked up by pocketfuls. Of course disappointment lurks in the pathway of all such. Nature, though often lavish in her gifts to particular localities, has not robbed eternity of Paradise, depositing it in some out-of-the-way corner of the earth. Seekers after terrestrial paradise in new countries are like the searchers for the kettle of gold at the foot of the rainbow. "Distance lends enchantment to the view," may partly account for the restless spirit which sends swarms of humanity across untrodden plains and deserts and unsailed seas in search of fairer homes.

An enthusiast can view a country as through a colored glass, and see nothing but lovely prospects and promises of a golden future. A morbid discontent can gaze upon the same scene and see only bleak desolation. The inspiring breeze that fans the brow of the former, is to the latter a pestilence-laden breath or the precursor of an icy blast. Thus the impressions of those coming to the Red River Valley will be as much determined by their own dispositions as by anything the country can offer. Those who have long been accustomed to undulating woodlands and meadows, and late in life see for the first time our immense, level expanse of fertile prairies, will likely find the heart too full of the visions of earlier life to immediately enter upon a full appreciation of this new country. But the vigorous and active, who can bring with them a heart full of hope and a mind and body full of work, can find few, if any more promising fields.

One need not expect to make a fortune here without earning it, to reap enormous crops of grain without laborious cultivation, nor to vault into the highest seat of any profession, without the same abilities and merits that would be required in other communities. It is our opinion that success is to be *earned* before attained. There are a few fortunate ones, the creatures of favorable circumstances; but the people, as a body, the millions, in every clime and community must pay the price of what they get. They must earn their reward, be that reward money, lands, reputation, power or popularity. From this preface it will be understood that no one need come to the Red River Valley, or anywhere else, expecting to find all things perfect; neither can he fail to find many very important advantages not enjoyed by most other places.

Many contradictory reports have been circulated regarding the water of the valley, the aggregate of which would be that this important article is alkaline, soft, hard, fresh, pure, impure, scarce, abundant, etc. The facts, to the best of our knowledge, are about these: In most places near the river, excellent, pure water, always very cold, can be had by digging deep. But occasionally the water found is salt, and very frequently slightly alkaline, not enough to be tasted, but enough to have a nauseating effect on very many newcomers, which wears off, however, in a few days, and no further unpleasant effects are felt. Sometimes pure and salt water are found within a few feet of each other. The water within a few miles of the river is what is known as "hard," and it is very hard—river water and all; but by boring some 200 feet abundant supplies of pure, soft water are found. As we go back from the river, say 20 or 30 miles, either east or west, especially west, the water is soft and is much more easily obtained, being abundant at a depth of from 8 to 15 feet, and is invariably first-class. But the soil is not so deep nor rich here as along the river; yet any of it, when compared with that of other States, is unusually rich. Where the soil is poorer and the water better, the land is slightly undulating, the drainage better, and no doubt would suit most people better than the dead

level nearer the river. But for never-failing farms, that will never wear out and will produce amazing crops year after year, we suppose the land within twenty miles of the Red River scarcely has an equal in the world. Farms near Selkirk, Manitoba, have produced enormous crops of wheat every year for sixty years. and show no sign of diminished productiveness.

The vegetation is far more luxuriant than we expected to find it. Along the rivers the very tall, spreading elm trees, the oaks, cottonwoods, ashes, lindens, maples, with the thick undergrowth of shrubbery, weeds, grasses, ferns, etc., all speak of vigor and fertility. One beautiful June morning, the writer, in company with another scourer of the woods, crossed on the pontoon bridge from Grand Forks, Dakota, to Minnesota, and in an hour or two got our satisfaction of scrambling through thorny thickets and over logs. We found the woods a perfect sea of wild roses, anemones, soloman's seals, lilies, honeysuckles, blood roots, wild currants, gooseberries, raspberries, blueberries, plums, crabapples, etc., all around. Raspberries and blueberries are brought into the towns in large quantities. Several plants look new to us, but in the absence of a botanical key we cannot give their names. Ye botanists, with "botany shovels" (Class '81 will explain this implement,) can find here much of interest. On the prairie the grass is short, thick, and is said to be extremely nutritious. The country thus far depends entirely upon the prairie for hay.

Most AURORA readers have doubtless read in Harpers and other magazines and papers articles on this valley, and seen the magnificient pictures of forty or fifty teams, all following each other closely, harrowing, plowing, seeding and harvesting. They are handsome pictures indeed. But very few in the Red River Valley ever saw such a sight, except, perhaps, when they were brought into such position on some "bonanza farm," to be photographed. These things are done only in pictures. The people plow, harvest, etc., much like most sensible people. Self-binding harvesters are the rule, and steam threshers with engines that burn straw for fuel are very largely used.

This is called a very windy country, but it does not seem much more so than Iowa. Umbrellas are little used, being superseded by rubber coats and cloaks. To a newcomer one of the first observations is the almost total absence of fences. But little stock is raised, and this is herded. Hailstorms are very frequent in summer, and sometimes destroy crops on small areas; but thus far no loss has been great enough to make an appreciable difference in the crops of the valley, or hardly of a country. Some farmers insure aginst hail. The present summer has thus far been most favorable; no severe storms or other drawbacks, and and the prospect is almost certain for one of the greatest crops ever known in the Northwest. Several counties through here expect to raise this year from one to two million bushels of wheat each.

TWO GREAT MEN.

So called great men of whatever age or clime, are men who have accomplished some great object and are recognized by the world as its benefactors. It matters not whether they obtain their renown on the battlefield, or in the study of science, art or literature; we call them great. Michael Angelo, a man of talent and genius, was a type of one kind of greatness. He was a member of the ancient court of Canosa and was born at Caprera, in the year 1474. Early in life he commenced the study of sculpture, under the great master, Bertoldo in the academy of art established by Lorenzo de Medichee at Florence. But not alone in sculpture did the great Angelo excel. His, we find is one of the most distinguished names in modern art, eminent alike in sculpture, painting, architecture, and poetry. Thus with the many advantages that the great artist's city of Florence could furnish him, added to his unusual skill and great genius, Angelo prospered and many are the works produced by him, which will ever be an honor and glory to Italy.

It is true that many were the enemies he

had. Some of them were great men, with power, and talents themselves. And they, jealous of his success, labored to blacken his name and desired to destroy his fame. But Angelo, with untiring energy, passed steadily on, making each accomplishment a stepping-stone to a grander success, and in the end, surpassed them all.

Let us glance for a short time at the life and times of George Stevenson. Though laboring in an opposite field and struggling with a different aim in view, he deserves no less, to receive the epithet, great. Born and reared among the colliers of England, his sympathies were early enlisted in their behalf. We find him at the age of seventeen neither capable of reading or writing. But he seems to have possessed mechanical instinct, for even when a child, his favorite amusement seemed to be the constructing of toy engines, with and for his play-mates. All through his youth and manhood his spare time was devoted tirelessly to the study of machinery. Step by step he advanced to positions of importance and influence, continuing still to pursue his studies in Engineering. Steam locomotives, after a time, began to engross his attention and subsequenly he devoted all his energies and time to the invention and perfection of a locomotive engine, the result of which can be but familiar to all.

Wide indeed, we see, is the difference between the lives and works of these two great men. Yet, each is the true type of the age and country in which he lived. Look at Italy, the home of Angelo, in the early part of the sixteenth century. The climate delightful; flowers, nature's greatest work of art, everywhere abounding Florence, said to founded on a bed of flowers, was then in the height of glory. Art, under the patronage of the Medici, had attained a great state of perfection, and works of art everywhere met the observing eye. This, then, is Florence, the home of Michael Angelo, where the artist's hand received its training and the poet's song could be but inspired. Can we wonder that he, endowed as he was, compelled a world to call him architect, sculptor, painter, poet.

Now let us take a glance at England in the latter part of the eighteenth century, the home and age of Stevenson. It was cold, practical and bustling. Everything was life and activity. The whole nation was busy. In place of the fine arts, were new inventions and labor saving machines. Instead of art galleries, attracting attention, the people looked with satisfaction upon their large manufactories. Can we wonder that these two countries, differing in almost every respect, produce different minds, different characters and different tastes? Likewise the works which these two illustrious men have left for the benefit of mankind? We need no more proof of Angelo's skill and genius, than that which decends to us in forms of short poems, beautiful frescoes, sublime paintings, noble specimens of statuary, and architecture and Saint Peter's, that mammoth structure which still stands and will continue to stand for ages to come, a wonder to all Nations. Every work and every figure of Angelo's is characterized by massiveness and in this respect, Angelo's and Stevenson's productious corresponds, the from one an artistic, and other from a mechanical view. The mission of Stevenson was different in nature, from that of the great artist. His achievement, one of the most important to the world of all the great inventions of the eighteenth and nineteenth centuries, benefitting alike, the rich and poor. Others before him, had attempted the difficult task, and failure was the result. But he, with a persistence and perserverence, which was one of his characteristics, continued steadily at work until his labors were rewarded by the construction and completion of a work that rendered his name a common word in every household. Stevenson excelled in but one direction. Angelo was a universal genius. Stevenson, by devoting his time and attention to his talent, was enabled to give the world a production to the greatness of which all society can testify. So wide is the difference between the parts of life which these two men represent, and were a part of, that no dividing line can be drawn proving the works of one superior to the other.

No artist should judge Stevenson's and no mechanic, Angelo's. Of the two shares of life, which personate the beautiful and artistic, the useful and the practical, one is as essential to life as the other, for all are created alike, possessing two sentiments, a love for the beautiful and a konwledge of the useful, and the cultivation of both is necessary for a symmetrical development Hence, both alike were beneficial to the world, and we can say of them that they were truly great men, and their works are standing to-day as monuments to their greatness.

SCIENTIFIC.

MISCELLANY.

A committee has been appointed by the French government to study the applications of electricity to navigation.

A market for the sale of toads to gardners, is held regularly in Paris every week. The prices paid vary from fifteen to twenty dollars per hundred, for good ones.

The largest masonry arch in the world has a span of 220 feet, with a height of 101 feet and a width of 20 feet. It carries the aqueduct by means of which Washington is supplied with water, over a small creek.

The Exhibition of Electricity now being held in Paris, is undoubtedly one of the greatest affairs of the kind ever undertaken. The formal opening was made Aug. 10th, although the preparations were far from complete at that time. The display is large and the exhibition is generally considered a grand success.

It is claimed that the problem of dividing exactly, theoretically and mechanically, any angle into any number of parts has at last been solved. The solution of this problem, long considered by a majority of mathematicians as impossible, will, we understand, shortly be published in pamphlet form.

But a short time has elapsed since the announcement was made that electric currents had been successfully used in performing surgical operations; closely following this came intelligence of an electric probe and of the utilization of electric currents in localizing metallic substances in the human body; and now we are told that the greatest discovery in surgery thus far in the year 1881, is that of Dr. McEwen who has successfully transplanted bone fragments of wedges taken from patients for curved tibias, into the arm of a child whose limb was useless by means of extensive necrosis.

The enactment of laws to prevent the adulteration of food or drugs indicates progress in regard to sanitary matters. At its last session the legislature of the state of New York made a law punishing by fine any person found guilty of dealing in adulterated food or drugs of any kind whatever. In the case of drugs, the law prohibits the dealing in any drug materially differing from the standard of strength given for such drug in in standard works in Materica Medica. In the case of food, all adulteration, imitation, coloring, polishing or powdering, or anything which would make an article appear better than it really is, is prohibited.

Prof. Remsen, of the John Hopkins University, has obtained some interesting results from experiments made to determine the influence of magnetic action on the chemical behavior of metals. By placing a shallow, thin iron vessel containing a solution of copper sulphate over the poles of a magnet, a uniform coating of copper would be deposited when not in the magnetic field; but if brought in the ffeld sharply distinguished lines, marking the outlines of the poles, were visible as depressions in the deposit. In this case a powerful magnet was used. With an electro magnet the effect was increased, no copper being deposited on a narrow space marking the outlines of the poles. The cause of this phenomenon has not yet been explalned.

SCIENTIFIC NOMENCLATURE.

PROF. WYNN.

As the student plods his way through the hard nomenclature of science, it does not always appear that there is any special advantage gained in having a difficult Latin or Greek word for that which might easily be said in English. These jaw-breaking words, he thinks are pedantic on the one hand, and excrutiatingly trying to the memory of the green student on the other, and he often laments that the great wisdom of the scientists could not be doled out to him in his mother-tongue.

But a moment's reflection will make it clear that the nomenclature is indispensable. First it forms a universal language in which scientists of all lands and all times can communicate with one another. Discoveries can be swiftly propagated round the world through this universal means of communication, despite the barriers of the different languages and nationalities which

they will meet on the route. Then in science the call for names, descriptive of the different classes and qualities of objects in their analytical study would be so great, that the resourses of our language could not stand the strain, and we should be reduced to a condition of lexicographical bankruptcy in furnishing the names. It is a fortunate thing for our language that the Latin and Greek are conveniently at hand from which to draw.

But another and noteworthy advantage is, that the inflected tongues from which we draw have the peculiar power of expressing in one word what could not be expressed, either in English or French, without in most cases a circumlocution. For example, *cotyledon* can be got into English only in the use of four or five different words, *the seed-lobe of a plant*, the Greek word itself meaning *a cup-shaped hollow*. At a single movement of the imagination an *asymptote* may be taken in, and the word will instantly fix it in speech, whereas it would be a task to be always saying and writing, *a line which though continually approaching a curve never meets it.* The Greek word itself means, *not falling together.*

In these days where all subjects are treated scientifically, and new sciences are reaching out to immense fields of their own, it must needs be that scientific nomenclature will correspondingly increase, and that we shall have extensive vocabularies of scientific terms alone. And this is actually the case. Every now and then some Dictionary of scientific terms is announced, and in the great Encyclopedias of recent issue this sacred language is conspicuously put forth. It is worthy of note, too, that in the more recent issues of this kind, not only the definition of the term is exhaustively given, but care is taken that the proper pronunciation shall be indicated by such phonetic expedients as will make it plain. This implies that the pronunciation of scientific terms is a matter that should be looked after, and certainly there is no excuse when it is bunglingly done. The general rule that should guide in all such matters is, of course, that the pronunciation should not take the word out of the classic habitat in which it is found. And as at this time Latin is almost uniformly pronounced according to the phonetic or Roman pronunciation—and will soon be everywhere so pronounced—it is only fair that this should be the pronunciation of scientific terms coming from that source.

Indeed we should call that man slovenly who would allow his pronunciation of scientific terms to run at loose ends. This sacred language should not be blunderingly ly used; and especially where there is a body of men together, all making up a great fraternity of science, all speaking this language, and cherishing it with the jealousy with the Jew guards the texts of his Sacred Scriptures. it is not fitting that various dialects should be admitted to throw this community into confusion. For what if in different departments, different dialects are spoken, and as sometimes happens one department will not tolerate the dialect of another, what in this case is the student to do? It is presumed that in general the departments lie so widely apart, as that for the most part each will be confined to a nomenclature of its own; yet there is a large territory over which the *consensus* of the sciences extends, and here of course a common dialect should prevail. We find no excuse for a slovenly pronunciation of scientific terms.

ELECTRIC STORAGE.

When the new secondary battery of M. Faure came before the public for examination four months ago, Prof. Tyndall stoutly maintained that such an expression as "electric storage" when applied to it was misleading, and for that reason should be dropped and something more appropriate substituted in its place. It seems, however, that the advice has not been well heeded and that the hold which the English and American scientific press has gained upon the expression will not be soon loosened by the most profound argument. Electric storage is not only convenient and definite but is already in good usage and there seems to be no valid objection to its final adoption.

At the same time it should be remembered

that the Faure battery does not retain electric energy as a tank does water. The storage, too, of grain in an elevator, or even of electricity in the conductors of a Holtz machine, or the sheets of a Leyden jar, is quite another affair. In each of these the substance is retained in the same form in which it is received and restored, and whether it be water, grain, or electricity, is supposed, during the whole time of its retention, to have an identity and definite existence of its own. But not so with the electricity stored in a Faure battery. Here the energy has assumed an entirely different condition and is not, during the time of its storage, electricity, any more than the sunshine locked up in a piece of coal is heat until released as such by oxidation.

Whoever has watched the interesting experiment of electric decomposition of water or electrotysis has the explanation of the whole affair in the clearest possible language. In this experiment, if two platinium electrodes be plunged in the water to be decomposed, which should contain a low per cent of sulphuric acid, and a current passed, it will be found that both electrodes are covered with bubbles of gas, the one oxygen and the other hydrogen, resulting from the breaking up of the water. The important fact, now, that these electrodes, when connection between them and the battery has been broken, have themselves the power to produce a current in the opposite direction from that which originally passed through them—a discovery due to the Erench physicist De la Rive— is the foundation of the secondary battery. Faure's "box of electricity," indeed, is only another form of the electrodes used in electrotysis with this difference, that the substance decomposed is oxide of lead instead of oxide of hydrogen.

The battery is quite simple consisting of two plates of metal—preferably of lead—between which is placed a piece of felt cloth coated on both sides with the red oxide of the same metal moistened with dilute sulphuric acid. For convenience, these two sheets with the oxide sheet between them are then bent up into a loose roll and the affair is ready to be formed, that is to receive its charge of electricity. When connected with the poles of an ordinary battery, precisely the same change takes place upon the surfaces of these plates as did upon the platinum electrodes, one having more and the other less oxygen than it had before the passage of the current; and if the current be sufficiently strong, the reaction may be carried so far that all the red oxide touching one plate is converted into the puce-colored oxide, and that touching the other into metalic lead, by the addition and substraction of oxygen; when the battery is said to be formed or charged. This is the "little witch" as Sir Wm. Thompson called it, which, weighing only seventy-five pounds, has the capacity to yield one million foot-pounds of available energy, and yields it in the form of a strong, steady current of electricity in the opposite direction from which the charging current came, and continuously, until equilibrium has been re-established by conversion of the higher oxide and metal to the intermediate form of red oxide, when the current stops and the battery is ready to be charged again.

An attempt to say in just how far this invention will probably be of aid in the utilization of electricity, would just now, be difficult and useless, but it certainly promises enough to demand careful attention from experimental scientists, and if possible, improvement. F.

THE CINCINNATI MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The thirtieth meeting of this, the largest scientific society in America, occurred recently in Cincinnati. The membership now reaches about 2,000, distributed throughout all portions of the United States. The annual meetings, which take place in August, are held in different cities in succession. Thus last year the meeting was in Boston, the year before in Saratoga; in 1878, in St. Louis; 1877 in Nashville, 1876 in Buffalo, etc. In 1872 the meeting was held in Dubuque.

The place of meeting has much to do with the attendance; thus for example, the Bos-

ton meeting last year was the largest o e ever held, as was to be expected; and this year the attendance was second only to that of the last year's meeting. Cincinnati with its central location, easy access, and with its many educational institutions, contributed very liberally, both in numbers to swell the attendance, and in scientific papers to add to the interest of the meeting.

The meetings were held in Music Hall, the pride, as well it may be, of the city, built through the liberality of one of her citizens. The opening session on Wednesday morning, August 17, was held in the Great Hall, which seats easily, 5,000 people, or with crowding, about 10,000. It need scarcely be said that the room was not crowded on that Wednesday morning. Upon the stage thirty or forty of the foremost scientific men of the country were seated; among them were Professor Brush, of Yale; Sterry Hunt, of Montreal; Prof. Riley, of Washington; Prof. Putnam, of Harvard; Hon. J. D. Cox, of Cincinnati; besides many others. After an address of welcome by Hon. J. D. Cox and a response by Professor Brush, the President of the Association, the meeting was declared formally opened. Some appointments were made and announcements read, and the members adjourned to meet in their proper sections; the mathematical and physical were in one place, the chemists in another, the microscopists still in another, and so with the anthropologists, the geologists and siologifts, and the entomologists. Rooms in the great building were assigned to each of these sections, and telephones connected all together, so that the business of all the sections could be known by any one or all.

In these sections the papers which had passed the critical eye of the Standing Committee, were read. Many of these were of a very high order and reflected great credit upon the association. Nearly two hundred papers were presented, but by no means all were read, and of course I heard but a small portion of them; one would have needed a dozen ears in as many different places at once to have taken all in.

The entomological papers were in some cases particularly interesting; for example Dr. Edwards, of Virginia, on the Length of Life of Butterflies, and a similar one on the Life Duration of Moths, by Prof. Lintner of New York. Prof. Riley, Prof. Cook, of Michigan; B. Pickman Mann, of Cambridge; Dr. Thomas, of Illinois; and Prof. Claypole, of Ohio, presented papers also. A characteristic of the scientific men gathered in this meeting was their argumentativeness. Every paper drew out an animated discussion which occasionally became quite lively, indeed.

Among the papers by the microscopists that by Dr. Sternberg on Bacteria, was by odds the most valuable. It was listened to with intense interest. The doctor is the greatest authority on Bacteria in this country. He was followed by Mr. Taylor, of Washington, in a paper on the same subject; and we have never seen a better illustration of the true and the false, the deep and the shallow in science. Mr. Taylor is the "microscopist," so-called, of the department of Agriculture at Washington, and it is but charity to say that he appeared to know next to nothing about the subject he attempted to write upon.

The geologists discussed rocks, of course, and quarrelled with one another too, as they always do. The zoologists, proper, were scarcely heard, and the botanists were also of so modest and retiring a demeanor that they presented but few papers. That by Prof. Beal, of Michigan, on the Motions of young roots of Indian corn was one of the best.

I cannot do justice in a brief report like this to the papers in the other departments. I must, however, ask your attention to one thing which was done in which we are all interested; viz: the action of the association in reference to the conferring of honorary degrees by colleges. After discussion the following preamble and resolutions were adopted without a dissenting vote.

WHEREAS, Many colleges in the United States in recent years have conferred the degrees of Doctor of Philosophy and Doctor of Science, not by examination, but honoris causa:

Resolved 1. That this association concurs with the American Philological Association in deprecating the removal of these degrees from the class to which they belong—(viz: B. D., L. L. B., M. D., Ph. D., and D. Sc.,) degrees conferred after examination, and their transfer to the honorary degrees—(viz: D. D., L. L. D., etc.

2. That a committee of five, including the President of the association, be appointed by the Chair to co-operate with the Committee of the American Philological Association in addressing a memorial to the Boards of Trustees of all colleges in the United States empowered to confer degrees, stating the objections to conferring the degrees P. H. D. and D. Sc., *honoris causa*, and praying them to discontinue the practice, if it exists, in the colleges under their control.

The meeting for 1882 will be held in Montreal. Dr. Dawson, the well known Canadian geologist, was elected President for that meeting. Without doubt the gathering of scientific men will be a large and profitable one, next year, under the leadership of such a master. B.

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THE AURORA, AMES, IOWA.

IF we could add to our faculties the power of reading the thoughts and motives of others, and could gather from our fellow students the design which each one has in attending this college what a variety of reasons we should behold. We should probably learn of a few who come from term to term simply because their parents insist upon their getting an education; it is evident that such will gain little benefit from their attendance; each duty will be performed drudgingly and with a longing look toward the time when school days shall be ended. To such the whole course is simply a systematized plan for rendering miserable several years of youth, and once without the college walls all that has there been gained will be speedily forgotten. We find that still others, anxious to acccomplish for themselves the most possible, and having concluded that a college education is a good thing to possess, attain it simply as an end and not a means. They consider that when the diploma is secured that all is gained, there is no desire to carry the quest any further. A college course can not furnish an education; it is only one of the many efficient instruments which will aid in its acquisition. There is a world of knowledge about us to which the instruction here furnished gives the key. If, after leaving the college walls we have no desire of reading upon and searching into some particular subject or the general field of knowledge then has our time been spent unprofitably. By means of the instruction here obtained every flower, every stone and every field of nature is able to impart to us a lesson; we may read understandingly the works of the foremost minds; and it is in order that they may be able to do this, that all should desire to attend college.

THE students, especially the voters, and all connected with the institution, are much interested in the case lately tried at Nevada —the State vs. W. C. Armstrong of 1881 and Geo. Reed of 1880, for alleged illegal voting at the election in Ames last November. The decision in the case of the Iowa City students was known but it was considered that the circumstances were different here. It is the opinion of the majority of those connected with the college that such students as are of legal age and are not depending upon their parents for support, who choose to make their residence here for a number of years have a right to vote, even if their residence is for an educational purpose. All friends of the students are anxious to see what they believe to be their rights established; and a subscription of $150 was quickly raised to assist in defraying the expenses of the trial. Although the decision at Nevada was against the students the case will be carried to the higher courts and it is hoped may be decided in their favor.

Quite a number of our students whose schools commence either immediately or within a few weeks, have taken advantage of the break in the regular routine to sever their connection with the college for the remainder of this term. While it speaks well for them as teachers, in that they are able to secure good schools for such long terms, yet at the same time it doubles their work here in school, having to make up more than half of the term's studies.

ALTHOUGH tha numbers were so few that three of the societies were unable to have sessions the Saturday evening before the Fair, the time was not allowed to go unemployed. Those who were present met in the Crescent Hall in the afternoon and prepared for a joint session in the evening. The programme consisted of two orations, a speech, a declamation, impromptu dialogues, and the discussion of a bill brought before the house as a committee of the whole to abolish the office of Vice President of the United States, and have the Chief Justice fill the position until the will of the people could be expressed in another election. The debate on the bill was long and exciting. Many good points were made on both sides, but the weight of the argument was against men rather than the office. The maledictions which were heaped upon the heads of the Vice Presidents who have been called to the presidential chair, were truly startling. Perhaps the best argument brought forth in favor of the bill was the fact that the administration of a Vice President means a minority rule. The programme taken altogether was excellent, and was one more proof that the societies are accomplishing the work wfiich they seek to perform.

THERE is complaint constantly made, both by outsiders and by all connected with this institution, because the attendance is not much larger. All recognize the fact that the teaching force is sufficient to instruct twice the number who now attend, and that recitation rooms, apparatus, etc., could easily be provided for many more than are here at present. The people of the State do not understand what the institution is, either in its object or its work; many scarcely know of its existence. The name is misleading, and a change in that would probably do much toward remedying the evil, but this could not do all. Our *alumni* are loyal to us, realizing the solid worth of the school, and both by their works and their ability do much toward bringing us students. But they do all that is done. True, for the last two years we have "exhibited" at Des Moines, but this will not accomplish the object. It does not speak well for the College to know that in the midst of the last term of the school year, both Professors and students can leave their work for a week to attend a State Fair; and even if it did accomplish its object, it is at too great a sacrifice to the students. The means by which all Colleges, as well as business enterprises, are to become known is by advertising. We might profit by the example of Cornell in this regard. Not only are advertisements of the school placed in many papers in different portions of the State, but the financial agent is continually bringing it before the people of the different churches of the Conference. Every Methodist minister considers it his duty to work in its interest. As a result, their attendance is much larger than ours, although it is a sectarian school. Here we have a State institution, with the best advantages for studying science of any school in the Northwest, and the people are ignorant in regard to it. They should be informed of its facilities by means of the newspapers. They should know that here is a chemical laboratory with appliances for one hundred students to have actual practice at the same time; that apparatus is furnished for explaining almost every subject in physics; that microscopes, and other needful instruments, are supplied for the study of Biology; that the library is unsurpassed, and that the several departments are conducted by professors who are thoroughly competent, and some of whom are gaining a reputation which is national. It is only justice to the nation which has furnished us the means of support, to the State which supplies the buildings, to the *alumni* and students whose interests are closely connected with the institution, that the Trustees tdopt measures for a system of advertising which shall enlighten the people of the State in regard to the Iowa Agricultural College.

THE Lecture Association hold their numerous meetings as usual, but as yet have secured no one definitely, although it is expected to have two lectures before Commencement. Dr. Thomas is spoken of quite prominently, but can not be secured for a Saturday evening, as it is necessary for him to be in Chicago each Sunday.

LOCALS.

Dance.

Lecture.

Joint session.

Musical rehersal.

—The circus at Boone took in—several of the boys.

—The field north of the college presents a very shocking view.

—Cold enough to require steam on the 16th inst.

—"Snow-bound" in chapel exercises causes considerable hilarity.

—Dancing school exercises tell us too plainly that the end approacheth.

—Archery seems to be getting the upper hand of the Veterinary department.

—Iowa employs something over 21,000 school teachers, a majority of which are ladies.

—Be sure and vote this fall, once at least as it only costs $10 besides your tax for the first ballot.

—A lady asked her husband to allow her to be weighed, as she wished to have her *weigh* once.

—The *staff* has been much improved during the past month. Lena knows how to bake boss bread.

A committee has been appointed by the French government to study the application of electricity to navigation,

—The Pacific is not the most noted resort for wayfaring mariners, nevertheless Saylors will insist upon going West.

—On a pretty girl saying to Leigh Hunt, "I am very *sad you see*," he replied, "Oh! no, you belong to the Jewish sect, you are very *fair I see*."

—*Student*—"That's what the author says, anyway!"

Prof. "I don want the author, I want you!"

Student. "Well, you've got me."

—"Our Country Cousin" is an immense piece when put on the boards by a good company. The next time they come along the boys had better "hire a haul".

A market for the sale of toads to gardeners is held regularly in Paris every week. The prices paid vary from fifteen to twenty dollars per hundred for good ones.

—Strangers visiting or driving about the grounds should beware and not come too near the building, as the eave-troughs are full of water and melon rinds, and are apt to overflow at any time.

—There is no reason why those who stayed at home should not have enjoyed themselves with recreation hour extending from 3 to 10 P. M. The time was employed to good advantage by most.

—There is a limit to all things! This being a general rule there is no reason why it should not apply to Sunday morning strolls by establishing their limit, confining them to the walk, the sun and platoon drill.

The largest masonry arch in the world has a span of 220 feet, with a height of 101 feet, and a width of 20 feet. It carries the aqueduct by means of which Washington is supplied with water, over a small creek.

There was a young man from the west
Who clad himself out in his best,
To the picnic he hied
And his pants were soon "pied."[2]
'Tis needless to chronicle the rest.

It is to be hoped, now that the Fair is over and we are settled down to business, that some of the horn-y ambitions of our young tootists have fled, and we will be allowed some surcease from this continual "wave of trouble."

—The entertainment list for the remainder of this term is pretty well filled up. There is only seven more Saturday evenings and there is the following list already: Joint session of societies, lecture, oratorical contest, and musical rehearsal—societies will have to suffer.

—It must have been a very app(a)ling sight to see the cottage boys vanish between the apple trees with their sacks over their shoulders when the College boys came up with that stealthy step which the cottagers thought could only be made by the great and only—the inimitable Harlow.

—The professor calmly asked, for what is good pasturage the most desirable? when out blurted a bright Freshman, for the lowing herd of course. The Prof smilingly replied, a little lower if you please and you will be just as distinctly heard.

—"Blow praises unto the Lord with your horned instruments," etc. Accordingly it was nothing more than right if the boys saw fit to adjourn to the woods with the band on Sunday, providing, of course, they went in the right spirit, and they undoubtedly did.

—The Adams county *Union* is now edited and published by A. B. Shaw, he having purchased the interest of Mr. Burch, is now sole proprietor. In a recent number of the *Union* we noticed quite a lengthy essay by Mrs. Murphy on "Our German Homes," which was read before our Domestic Economy class.

The re-union of the veterans of Story county was held near Ames, on the 16 and 17 insts. It was attended by a large number of the "old boys" who thus met to renew old acquaintences, talk over old times, and have a holiday in this, the afternoon of their life. The cadets went down to show them how the "young boys" could imitate their worthy ancestors.

—He was a stranger to our bill of fare, else he would have known the difference between cake and corn bread, although we acknowledge that is a very fine distinction for one to make. A good test, however, is to see if it will make a first-class pudding. If it does, you can wager your reputation as a domestic economist that it is genuine hoe-cake.

—Two of our students were successful contestants at the fair. Mr. Arthur Kemper took the first prize for exhibiting the largest collection of stamps, his collection numbering over 1400. Mr. Chas. Kegley took first prize for exhibiting the finest collection of butterflies and bugs. This speaks well for the school and while our botanical contestants were unsuccessful this year, we hope that the partial success of our students may tend to waken a more enthusiastic interest and lead to greater and more deserving exertions in the future.

—Mr. Frank Smith, the agent of Walke's Flexible Fountain Pen for Story county, has sold quite a number to our students, who have been in every case highly pleased with them, they having given entire satisfaction. The Walke Pen is very simple in construction, consisting of simply a vulcanized rubber tube and a plain gold pen, of the John Holland make. The flow of ink is easily regulated, enabling one to make the finest hair line or do the heaviest ornamental shading.

THE FAIR.—The second annual exhibition of the Iowa Agricultural College at the State Fair is now over, and everything is in business order again. That it gave general satisfaction is undoubtedly true; that it was a surprise to thousands is likewise certain, and that it was from first to last a grand success, is and must be admitted by all. One building was devoted entirely to the use of the College for their exhibits, and constituted one of the greatest attractions of the week. In this building was represented the Civil Engineering, the Mechanical Engineering, the Physical, the Botanical, the Chemical, the Zoological and Entomological, the Veterinary, the Horticultural and the Agricultural departments, under the charge of the various Professors and their assistants.

As to the Cadets and the Band, it is only necessary to say, that despite two or three little squabbles and the gratuitous blessings of a few soreheads who were either opposed to guards on general principles, or because they insisted upon doing their duty to the letter, that the boys gave general satisfaction.

In connection with these Fair items, it becomes our duty and pleasure to extend, on behalf of the Cadets and students in general, to the managers of the Northwestern company and their courteous and obliging employes, their most sincere and hearty thanks for the many favors of which they have been the recipients at their hands.

In conclusion we would propound the question, and leave it open for discussion, "Whether the College and students have been the gainers or losers by the week's work."

—Oh ! what a villain I am!

—Sophomore engineers are now building their first railroad.

—The rains disconcerted everybody during fair week, except the lemonade stands.

—Science with practice, so say those who are taking practical lessons in the confectionary lines.

—It's a Long Branch the President has taken but it is to be hoped he has twigged it right this time.

—"Don't you go Tommy, don't go, it's only loungers, etc." Chicken is good under any conditions however.

—Dr. Bliss sits on the beach at Long Branch and quietly hums: "Oh, such a pus-ition for a physician."

—Labor is plenty and laborers are few, nevertheless, the few who are faithful find abundance to do in the vineyard.

—The flower garden looks as deserted as a last years picnic ground—the flowers all having been taken to decorate the returning braves.

—The successful race horse wins by four feet, yet he may come out only two fore-feet ahead, but if it wasn't for feet he would forfeit the race.

—Jerry allowed the boys pasturage in the grape patch at ten cents ahead during vacation. The Judiciary charge a dollar on ordinary occasions.

—One of the young gentleman after making preparations to attend the fair, concluded to remain at home as he didn't want to meet the "governor."

—The old home of John Knox is now used as a tobacco and snuff manufactory. This is an age of progress and advancement, an age of utility and application.

—It was reported not long since that some of the Junior boys had a trial pending before the judiciary for some of their "moonshining" escapades in the chemical laboratory.

—The most popular amusement during fair week was playing "Drop-the-handkerchief." A fiddle was taken along to keep up proper interest in the game, however.

—They both tried in the same quarters; when the replies came, the one consolingly sighed, "well it's a gospel truth which says the one shall be taken and the other shall be left."

—"How sleep the brave," anxiously queries the cautious "night hawk," as he approaches the grape patch about midnight armed with a big pillow case and a good appetite.

—Give the cooks credit for getting the dinner on time for once, but the musical sound of the jingle was not greatly appreciated by the Prof. who had just began his closing prayer.

—Forgive us for delaying the paper this month and we will solemnly promise upon our bended knees never to 'take in' another State Fair, (as a guard)—no, not for four dol—beg your pardon.

—They put a veto on having any ice tanks thrown down stairs while the professors were gone to the fair by sending the only remaining one on the boys floor along to keep the cadets cool.

—One of the Junior boys, while rapt in meditation over a basin of soap-suds, called affectionately on the Professor as "father," after which the professor smiled and our Junior friend horrified his classmates by actually blushing.

We notice commendary comments throughout the newspapers of, not only our own State but neighboring States, of our college exhibit at the State Fair. A Nebraska correspondent says: "It equalled anything he saw at the Centennial."

—A Freshman made the remark that he thought that it would have looked better if they hadn't stained the windows, the Proctor happening along at that instant seemed to be of the same opinion, and our Freshman friend now includes a window brush among his chattels.

—The annual statement for 1881 is now out and ready for circulation. The statement in its workmanship far excels the one of last year and its neatness speaks well for the facilities and ability of the *Intelligencer* job department.

PERSONALS.

The following compliment to one, whose many friends at the I. A. C,, esteem as a most deserving young lady, is clipped from the Charles City *Inteligencer*:

During the sickness of her father and Mr. Smith, Miss Etta Andrews is keeping the books and managing the complex affairs of their big establishment. She receives orders, gives directions in regard to filling them, attends to shipments, and the work goes on smoothly and well. We take off our hat to Miss Andrews, the truest and best type of the American girl.

The following personal items were gleaned at the fair: H. D, Reeves goes to Iowa City to take a course in law. W. B. Whitney is at home in Indianola. Mamie Hutchins just returned to her home in Des Moines after a very pleasant visit to Mrs. Emma Mc(Knight)-Caughnan at Winterset. George Dudley paid his mother, Mrs. Welch, a short visit. Mularky took in the wonders of the fair. Frank Green called on the boys frequently during their stay in the metropolis.

ALUMNI.

The P hilos expect to take part in the graduating exercises this fall, and solicit correspondence with their alumni.

'80. Will Welch, of Corning, was present at the fair with a fine display of butter from his creamery.

'78. E. G. Tyler stopped on the old camping ground for a few days Mr. Tyler is in an abstractor's office in Logan, Iowa, at present.

'78. H. L. Glenn, after taking in the State Fair, run up on the branch and took in his old *Alma Mater* for a few hours. Come again H. L. when we are all at home, it does the boys good to see the old familiar faces loom up now and then.

'78. "Dick" Burke, of Sigourney, Keokuk county, State of Iowa, United States of America, while on a recreation jaunt to Des Moines took occasion to run up to the old country residence, just to see how the place was progressing, and if the boys were happy. He didn't find the boys at home, but said the young ladies were making things pretty lively.

'72. J. C. Arthur, one of our boys who stands in the front rank, came in upon us and made himself at home for a few days, after the fair. Mr. A. still makes his home at Charles City, he also keeps up his interest in botanical pursuits to which his excellent herbarium, which was on exhibition at the fair, bears evidence.

MISCELLANY.

Kate and Dupli-Kate are the names they gave the twins.

A woman wears her watch at her girdle because she is used to waist time.

"Do you play by note?" queried a stranger of a pianist. "No, sir, I play for cash, only."

Why does a spoon reclining in a cup of tea resemble a handsome young lady? Because its in-tea-resting.

No, Jane, the man who hung on her every glance was not strangled to death, but he ought to have been.

"Do you believe, sir, that the dead ever walk after death?" "No doubt of it, ma'am; I have seen the *dead march*."

An Irishman looking over a physician's bill, said he had no objection to paying for the medicine, but his *visits* he would return.

PRINTER'S TOAST.—Woman: *rule* ot our infancy; *guide* of our childhood; *measure* of our youth; *fat take* of our manhood; *star* of our hope; *pearl* of our middle age: she corrects the last *stick*, smooths the last *sheet*, and gives the last *embrace* ere we *frisket* to the final *lock up*.

The following conundrum was propounded by a lady to her Junior friend: "Why are the Junior boys like the trees here on the lawn?"

Junior—"Because they are spruce."

Young Lady—"No; because tney are evergreen(s)."

Junior—"Let's go down and see the new bridge."

Prof. Beesey
Ames Ia

THE AURORA.

IOWA STATE

AGRICULTURAL COLLEGE.

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